

The Russian power industry shortly before reforms

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This study is an overview of the current condition and principles on which the Russian power sector has been functioning so far. This analysis has been carried out against the background of the changes that have been taking place in the sector since the beginning of the 1990s. This text also contains a description of guidelines and progress made so far in implementing the reform of the Russian power industry, the draft of which was adopted by the government of the Russian Federation in summer 2001. However, the purpose of this study is not an economic analysis of the draft, but an attempt to present the political conditions and possible consequences of the transformations carried out in the Russian power sector. The final part attempts to evaluate the possibilities and threats related to the implementation of the reform in its present shape.

Theses

1. The situation in the power sector is one of the major factors affecting the condition of the Russian state. The Russian power industry subsidises other branches of the economy as well as non-production sectors, and allows the continued existence of the energy-consuming Russian industry. The power sector is also a creditor of the most profitable export branches, which use their lobbying abilities in order to obtain preferential energy prices.
2. The Russian power market is strictly regulated at both federal and local levels. The state and the regional administrations fix not only the tariffs but also the scope and manner of energy distribution. Governors who fix local energy prices treat them as their own political instrument. Cheap energy ensures popularity and political support for the regional heads, particularly the support of the industrial plants who receive it. The populist policies conducted by regional leaders in this field have triggered many local power crises.
3. Energy prices in the USSR (and later in the Russian Federation) have not covered the cost of energy production and transmission for many years. Since the establishment of the power monopoly RAO UES of Russia in 1992, the prevailing forms of settlements for electrical energy were barter exchange and money surrogates. The share of cash in these operations was minimal. After Anatoly Chubais, the advocate of the monopoly reform, took over the concern's management, the consumption and production of electri-

cal energy in Russia increased in 1999–2001 for the first time after a dozen or so years of decline, and barter exchange and money surrogates were almost totally eliminated from power settlements.

4. The long years during which the Russian power sector functioned on an almost cash-free basis, when the power market functioned very inefficiently, resulted in an ever deeper degradation of the infrastructure and in the sector's undercapacity, owing to its chronic indebtedness and lack of investment funds. Without fundamental reform to make the flow of investment possible, the Russian power industry would have problems to meet the demand of domestic recipients in the near future, and would become an impediment to economic growth.

5. The restructuring of the RAO UESR power monopoly and the reform of the Russian power industry is a crucial step in the state modernising programme planned by the Kremlin. The most serious hindrance to its implementation is the inefficiency of the natural-resource monopolies (RAO UES, Gazprom and the railways), resulting from the fact their economic role has been wrongly defined, and they are thus sponsors of an inefficient and anachronistic economy.

6. The project concerning the reform of the power sector, which was torpedoed by influential interest groups, is increasingly taking on the shape of a compromise. The huge resistance encountered whenever an attempt is made to restructure the power sector slows down the implementation of the reform. Nevertheless, owing mainly to the determination of RAO UES' management and the political importance of the monopoly's president Anatoly Chubais, the reform is making progress. There are many factors, however, which make a successful implementation of the reform highly unlikely, at least any implementation which is consistent with the proposed schedule.

RAO UES of Russia – a holding structure

RAO UES of Russia – Russian Joint Stock Company 'United Energy Systems of Russia' – is the largest producer of electrical and heat energy in the Russian Federation. The electrical power plants and heat & power stations which are part of its holding generate over 70% of all the electrical energy produced in the Russian Federation¹. The remaining 30% is produced by the electrical power plants of two regional power companies which are not included in UESR – the Irkutskenergo and Tatenergo Joint Stock Companies; these are presently controlled by the regional authorities of Irkutsk Oblast and of Tatarstan² (just over 15%), and by nuclear power plants (10–14%)³.

RAO UES is also the largest distributor of electrical and heat energy in Russia, and the almost exclusive owner of a nationwide grid of transmission lines. UESR owns more than 96% of the grid (including all high-voltage transmission lines and the main lines connecting regional systems). The power grid on the territory of the Russian Federation is not a single structure. The northern and eastern peripheries such as Kamchatka, Yakutia and Sakhalin are isolated in the power sense; the flow of energy between Siberia and the Urals is limited as well (the main high-voltage transmission line between these regions runs through Kazakhstan). In addition RAO UES is also the main operator of the Federal Wholesale Energy and Power Market (FOREM), which has surpluses of energy generated in the Russian electrical power plants of all types (heat, water and nuclear) at its disposal. The monopoly, which has 80 percent of votes⁴ in the FOREM authorities, controls all energy purchase and sale transactions made via FOREM.

The present structure of the power monopoly was formed at the beginning of the 1990s, during the privatisation of the Russian

Table 1. Production of energy by RAO UESR in 1996–2000 (in bn kWh)

	1996	1997	1998	1999	2000	2001 (3 quarters)
Production of energy in Russia	831	834	827	845	876	627
Production of energy by RAO UES	615	607.7	604	602	623	450
Proportion of the energy produced by RAO in the total energy production in Russia (in %)	74	73	73	71	71	72

Source: www.rao-ees.ru

industry. By virtue of the presidential decrees of August and November 1992, all electrical power plants in Russia (except for the nuclear ones)⁵ were divided among the holding of RAO UES and the AO-Energos regional power joint stock companies. Consequently, the Russian power monopoly UESR comprises 73 regional power systems, controlled (to varying extents) by the mother holding. RAO UES owns between 25% and 100% of the shares in individual electrical power plants and local power companies. The monopoly owns also controlling blocks in 32 large electrical power plants (including 13 water power stations), which are independent entities within the Russian power market. The holding is also the sole dispatcher of transmission lines of a total length of 2.679.600 km covering the whole territory of the Russian Federation, including over 150.000 km of high-voltage mains. In total the monopoly controls 96.3% of the Russian power grid, for which it charges subscription fees from regional AO-Energos and independent recipients. The charges for transporting energy constitute a considerable share of the holding's revenues⁶. Furthermore, the RAO UESR structure includes the Central Dispatch Board (CDB), the general energy dispatch unit for the whole domestic power market of the Russian Federation.

Stock ownership

The main shareholder of RAO UES is the state, or more precisely, the Russian Fund for Federal Property Fund (RFFP). Out of the block of 52.55% of the shares belonging to the RFFP, one-third (around 17%) has been distributed among the authorities of the areas of the Russian Federation. 30.59% of the holding's shares belongs to foreign shareholders, as do blocks of shares in many regional companies. The block belonging to non-residents has long been the cause of dispute in the Duma because, in accordance with the law, this block should not exceed 25%. 16.68% of the power monopoly's shares belongs to Russian investors: 4.96% to personal entities and 11.36% to legal entities. The majority of the personal entities are shareholders who received shares in return for privatisation bonds in 1993. This block of shares is scattered, and in principle its owners do not participate in general shareholders' meetings. As for the legal entities, the owner of the largest block (more than 4%) is Gazprom. The largest block owned by foreign investors (19.96%) was deposited in the Bank of New York International Nominees⁷. RAO UES votes with this block, because in accordance with American leg-

islation banks do not participate in the general shareholders' meetings of their customers. The Board of Directors of the holding is composed of 15 persons, who represent three main forces: state representatives (7 persons), the regional elite (3 persons), and the RAO UES Management Board (3 persons). The remaining shareholders – non-residents and Russian legal entities whose representatives sit on the Board of Directors – do not constitute consolidated groups, and have no significant influence on the decisions taken by this body.

Russian energy market and tariff policy

Not all local power companies (AO-Energos) are able to meet the power demand of the regions in which they operate. This particularly applies to the poorly industrialised southern regions of the Russian Federation. There are also regions, such as the Irkutsk or Moscow Oblasts, where production is higher than the local demand. The energy surpluses go to the Federal Wholesale Energy and Power Market (FOREM)⁸, which includes the Centre for Agreements and Settlements (CAS), a specialised body whose task is to determine the quantities of energy which should be, or could be, provided by producers. The CAS also takes decisions concerning the details of energy sales contracts; this includes bringing together recipients and producers by means of administrative regulations. The institutions of the current Russian power market (FOREM and CAS) are fully controlled by the producers. The majority of votes in their authorities (80%) belong to RAO UES; the remaining 20% belong to representatives of Rosenergoatom⁹. Presently (according to data for 2001) 35% of the energy generated in Russia is sold via FOREM. Half of that is produced by RAO UES electrical power plants; 40% is supplied by

Table 2. Producers of energy in Russia (data from 2000)

	Share of total production (%)
RAO UES, incl.:	72.5
Thermal power stations	56.7
Water power stations	15.8
Nuclear power plants	9.9
Irkutskenergo	6.0
Tatenergo	3.3
Other	8.2

Source: www.rao-ees.ru

nuclear power plants, and 10% are surpluses from regional electrical power plants.

FOREM's prices are fixed by the Federal Energy Commission (FEC), which is subject to the government of the Russian Federation. Energy prices on the federal wholesale market tend to be lower than in local power companies. However, access to this market means that interested parties should have a proper infrastructure (including transformer stations) as well as the consent of local authorities. For large industrial enterprises, which pay higher prices for energy than individual recipients (and in this way compensate for some of the losses following from underrated power tariffs for the public), it is practically impossible to obtain such consent. For example, no aluminium plant has the right to buy energy within FOREM.

At the regional level, energy prices for the public and for industrial entrepreneurs are fixed by Regional Energy Commissions (REC), which are entirely subject to the local administration. Therefore it is the governors who decide power tariffs in the regions. The governors' policy in this field mostly boils down to underpricing, even when local authorities own the controlling block of shares in the local AO-Energo. The excessively low tariffs do not provide enough funds to buy fuel for electrical power plants, which have to limit their energy production due to lack of fuel. A characteristic feature of the Russian power market is the huge number of pyramid-like intermediary structures, set up mostly by local administrations, which thus become responsible for organising the distribution of light and heat, and collect charges. This money rarely reaches the power engineers; sometimes a small proportion of the dues is transferred with delays of many months or even a few years. According to the estimates of the holding's trade department, there are anything from a few up to dozens of intermediary companies in every region of the Russian Federation. There are over a thousand of them throughout the country, and they are the debtors with whom RAO UES has the greatest problems regarding debt collection.

It is thus apparent that the Russian energy market is strictly regulated at both federal and local levels, although the criteria of this regulation are not wholly transparent. The state and regional administrations fix not only the tariffs but also the scope and the means of distribution; they decide who will supply energy, how much and to whom, who is going to pay and how much, as well as who will receive energy for free (most often because of their useful political links).

The electricity prices charged in the USSR, and later in the Russian Federation, have never covered production costs. Since the beginning of the 1990s the disproportion (in relation to Soviet times) has been growing between the rise in electrical & heat energy prices and the prices of industrial production, particularly raw energy materials. In the period 1991–1999, prices for industrial goods increased 30 times on average; the prices of energy forms used in electrical power plants (coal, mazout) rose 50 times, whereas electricity prices rose 16.3 times¹⁰. The cheapest fuel is still gas, for which the prices for domestic recipients, regulated by the state, increased only twelve times during the same period¹¹. The debts of the largest gas consumer in Russia (RAO UES) to gas concerns, and the excessive (in the opinion of experts) share of gas in the production of electrical energy (on average 64% of the energy generated in thermal power stations of the Russian Federation; the analogical figure in developed countries does not exceed 30%) are the causes of permanent conflict between the two monopolies. For many years Gazprom has made attempts, with various levels of success, to reduce supplies of this raw material to UES.

Energy as instrument of regional policy and a tool for lobbyists

Governors who decide local energy prices treat them as their own political instrument. A common practice applied by regional authorities is to underprice energy and to write off the power debts of 'their' industrial enterprises. Cheap energy – and even more so, free energy – ensures popularity for the regional heads and guarantees the political support of the largest recipients, to wit, the industrial plants. Over 60% of the industry's debts to UES come from 'friendly' enterprises in those regions whose heads are the most active in combating the clean-up programme in Russian power engineering¹². Despite visible improvement in the situation in 2001, the indebted, worn and torn local electrical power plants and heat & power stations are still unable to meet the recipients' demands, particularly in wintertime. Power engineering troubles (long hours of heat and electricity cuts) afflict many regions and towns of the Far North and the Far East of the Russian Federation each year¹³.

On the other hand, cheap energy and manipulation of power funds (allocation to other needs of local budgets, including in the local barter trade, non-cash settlements etc.) allow governors to

regulate the economic and social situation in the regions. The largest quantities of energy (apart from the already privatised ferrous and non-ferrous metallurgy), both nationally and regionally, are consumed by three subsidised sectors: the public utilities sector, agriculture and transport, as well as the power industry itself. The power system is a sort of stabilising element which makes the sectors' existence possible. The power sector is also a creditor of the whole economy, including for the most profitable export branches. All of them use their lobbying possibilities in order to obtain preferential energy prices.

The industry which consumes the largest quantities of energy, non-ferrous metallurgy, demands the largest allowances, and is usually supported in these demands by the local power elite.

Russki Alumini is only one example. This firm, the largest aluminium producer in the Russian Federation, which bought out considerable shares in the neighbouring water power plants¹⁴ owing to its links with the authorities of the Federal Energy Commission, has had a significant influence on the maintaining of stable, low energy prices for several years. The attempts made by RAO UES (as the main shareholder of the local power plants) to change the management of the regional AO-Energos have mostly been to no avail. The heads of the Russian regions have also supported (and still do support) the separatist aspirations of the companies which are independent or very little dependent on RAO UES such as Irkutskenergo, Tatenergo or Bashenergo, which have been boycotting the power monopoly for several years, and refusing to pay subscription fees for energy transport via the

Table 3. Energy consumption in the economy of the Russian Federation, and the share of each sector in energy consumption in 2000

	Energy quantity (in bn kWh)	Share (in %)
Industry (total); incl.:	292.6	49.7
Fuel	64.7	11
Ferrous metals	47.8	8.1
Non-ferrous metals	58	9.9
Chemicals and petrochemicals	34.1	5.8
Machine building and metalworking	39	6.6
Lumber, pulp and paper	10.3	1.7
Construction materials	12.2	2.1
Light industry	4.3	0.7
Food industry	7.2	1.2
Other manufacturing industries	15	2.5
Agriculture	25.1	4.3
Forestry	0.3	0.1
Transport and communications	60	10.2
Construction	4.9	0.8
Housing and public utilities, households	119.1	20.2
Other sectors	86.6	14.7
Total	588.6	100.0

Source: www.rao-ees.ru (data from the report for 2000)

nationwide grid. In various instances, the courts and even armed forces of local military units and the OMON¹⁵ have participated in the permanent conflict between UES and the aluminium magnates, local authorities and regional power companies.

RAO UESR situation

The condition of United Energy Systems of Russia, the company whose turnover (according to various sources) amounts to between US\$10 and 20bn¹⁶, is best shown by the fact that the power monopoly is one of the largest creditors of the federal budget in Russia, and at the same time a serious debtor.

For many years, electrical energy prices for both the general public and the state-financed institutions have not even covered production costs. Until now, many local budget bills have not provided for funds for energy charges; electrical energy meters were installed for the first time in some households and institutions at the end of 2000. On the basis of available sources, it is impossible to estimate the real amount of the debts of energy consumers (regions, cities, industrial plants etc.) to RAO UES. The one certain thing is that the largest debtors to the monopoly are the federal and local budgets, and more precisely the state-financed institutions (the health service, education, the army etc.) and their wholesale intermediaries. At the beginning of 2000, the total debts of domestic recipients for heat and electrical energy exceeded 26 bn roubles¹⁷. However, the results of 2000 show a favourable change in RAO UES' situation. The monopoly managed to collect about 115% of the payments due, including over 80% in cash¹⁸. The surplus accounted for the repayment of part of the debt. However, this does not mean that the problem of 'power payments' has been solved. On occasion, the press reports conflicts between power entrepreneurs and the recipi-

ents. Since the beginning of 2002, RAO UES has cut power supplies to premises owned by the Ministry of Defence of the Russian Federation; electrical power plants and dispatching stations have been occupied by armed military units. The Duma was involved in defending the army against 'RAO UES aggression'. The power debts of the Ministry of Defence exceeded 5 bn roubles (as of 1 March 2000). The debts of the wholesale intermediaries to the monopoly exceeded 10 bn roubles¹⁹.

Since the establishment of RAO UES in 1992, the prevailing form of settlements for electrical energy was barter exchange and money surrogates (bills of exchange, settlement letters etc.) The share of cash in these operations has been minimal; for example in 1998 it amounted to little more than 10%²⁰. Similar patterns of settlements have also been commonly applied in other sectors of the Russian economy.

In this situation, the results reached by RAO UES under the present chairman of the holding's Management Board Anatoly Chubais²¹ in the last two years (which after the crisis of August 1998 has also been a period of economic growth) can be considered impressive. In 1999, for the first time after a dozen years of decrease, both the consumption and production of electrical energy in Russia rose²².

In 2000, UES significantly reduced the barter exchange and money surrogates in its settlements. In the second half of 2000, the share of cash in current payments collected by the monopoly reached almost 80%; in 2001 it exceeded that amount. Also in 2000, RAO UES started to pay its current tax dues almost in full for the first time. It would not have been possible to achieve such results, forcing the recipients to show more payment discipline, without applying draconian methods to the debtors: power cuts, property confiscation, blocking bank accounts, initiating bank-

Table 4. Production and consumption of electrical energy in the former USSR and in Russia in 1990–1999 (in bn kWh)

	1990*	1991*	1992	1993	1994	1995	1996	1997	1998	1999
Production	1636	1607	964	913	808.5	816	805	794.5	786	798
Consumption	1488	1475	880	831	731.5	739	729	719	713	728
Export	34	19.5	44	43	44	38	32	27	26	20
Import	1	0.07	27	25	24	18	12	7	8	6
Losses	114.5	113	68	63.5	56.5	57	56	56	55	56

Source: www.eia.doe.gov; *data for USRR

ruptcy proceedings, court cases etc. At the end of 2001, there were over 100,000 pending cases for repayment of debts brought by RAO UES before courts of various instances, and several hundreds cases against RAO UES had been filed by institutions that suffered heat and power cuts²³. In this way the moderately popular head of the monopoly Anatoly Chubais has become the number one enemy of the regional and industrial elite. However, the methods he applies may bring only short-term relief to the financial problems of the Russian power system.

The long years when the power sector functioned on an almost cash-less basis resulted in the regrettable condition of its infrastructure. Most of the electrical power plants and heat & power stations presently operating in Russia were built in the 1960s. Since the mid-1980s, the finances for the construction of new plants and transmission lines have been drastically cut²⁴, and at the beginning of the 1990s the financing stopped altogether. For over ten years there have been insufficient funds to modernise the electrical power plants, transformer stations and grid systems, and maintenance is restricted to current repairs only. According to data from RAO UES, the level of equipment wear and tear in electrical power plants reached nearly 60% (data for December 2001); the level of wear and tear of transmission lines and equipment in substations exceeds 40%. Due to the ageing of power plants, each year sees ever more numerous breakdowns. The power reserve of electrical engineering system is currently so low that in many regions it is incapable of meeting peak-time demand. Without the necessary expenditures, and principally without reducing the energy consumption rate of the Russian economy, the pessimistic scenario which many experts have heralded regarding the situation of the power sector in the Russian Federation may come true by 2010: more than half of power equipment would not work, the RAO UES system will no longer form a coherent unit (as energy transmission between the regions will become impossible), and the state will face a power famine²⁵. According to the RAO UES analysts' estimates, the power monopoly needs around US\$2.5 bn simply to maintain the production of electrical energy at its current level. The amount of investment that could prevent technological disaster in the Russian power sector and ensure its development in the coming years is estimated at US\$50–70 bn²⁶. Russia does not have such financial means. The only way to improve the situation and to attract foreign capital is to create favourable conditions for investment, and that means a power market.

Reform

The vision of a power disaster awaiting Russia – a key argument of the main advocate of radical reform in the sector, RAO UES head Anatoly Chubais – is probably too apocalyptic. Its opponents question not only the very possibility that the black scenario of the collapse of the Russian power industry will come true, but also RAO UES' own estimates of the amount of expenditure necessary for maintaining and increasing the energy output. But it is undeniable that the inefficiency of the natural-resource monopolies – resulting among other things from their wrongly defined economic role as a sponsor of an inefficient, anachronistic economy, and a wrong system of price fixing – are a serious impediment to the currently planned development and modernisation of the state. The highest bodies in the state authorities of the Russian Federation must be aware of that fact, as is proved by the consistency and determination with which the government is taking decisions on reforming the Russian power sector.

On 11 July 2001 Prime Minister Mikhail Kasyanov accepted the basic guidelines for reform in the power sector. The cabinet's decision has put an end to the almost year-long struggle over the future shape of the Russian power sector, which broke out directly after Anatoly Chubais devised and announced the restructuring programme for the sector. Almost all elements of state power, industrial lobbies, regional elites and the most important political forces took part in the struggle. Each party tried to force through its own programme for the power reform, which would be favourable for specific interest groups only. During the debate, the number of concepts was reduced from a dozen or so to two, which for the sake of simplicity, might be called the government concept and the governor concept. The adopted programme, prepared by the minister for economic development German Gref, is a compromise version of Chubais' concept which includes some of the postulates put forward by the regional elites and minor shareholders. Despite a number of concessions, Gref did not give ground in two of the most basic issues in which the competitive programmes differed. The main contradiction concerned the future structure of the Russian power sector. The governors called for a vertical division, that is, the creation of vertically integrated regional companies which would ensure complete independence of the power sector²⁷ for the regional authorities of the Russian Federation. The government opted for a horizontal division – the separation of a monopolistic segment in the power sector, controlled by the state (grid and dispatch services), and areas that

would function according to market rules (production and trade). The programme of reforms adopted by the government provided for the setting up of the Federal Grid Company (FGC), a state monopoly which was to include the majority of transmission lines that presently belong to regional AO-Energo companies. The second bone of contention was the stock ownership of the future grid company. The governors' lobby defended minor shareholders and insisted on the so-called 'mirror distribution' of shares, namely the maintenance of the current proportions of stock ownership in the FGC: 52% for the state, the rest to be distributed among the remaining shareholders. The government declared its respect for the rights of shareholders, and it assured that the process of including regional mains transmission to the FGC would take place 'lawfully, and only according to market-economy methods' – by buyouts or the exchange of shares.

The differences between the two competitive programmes mentioned above quite clearly determine the interests of the parties and the source of their conflict. In principle, the game is being played on two intermingling levels:

- 1 – between the centre which wishes to keep the 'switch' in its own hands, and the regions for whom power autonomy would ensure more independence. Some commentators were even of the opinion that the authorities would certainly take advantage of RAO UES reform to crack down on regional separatism;
- 2 – between reformers (advocates of free market and modernising the domestic economy) and the post-communist political class (who fear changes and are accustomed to direct, hands-on control). The choice (in consultation with President Putin) of Gref's concept is one more confirmation of the Kremlin's centralising thrust in its internal policy and of its priority in national interests.

According to the programme accepted by the government, any in-depth restructuring should first of all include RAO UES itself. The monopoly is to be divided into three independent structures: production (electrical power plants and heat & power stations), trade, and transport (the grid system). After completing the transformation, the state would take control over the transport part (transformed into the Federal Grid Company) and the dispatch part (Central Dispatch Board or CDB). The remaining areas (production and trade) would be privatised, and would operate in conditions of free competition.

The duration of the reform (8 to 10 years) is divided into three stages:

The first stage, estimated to take three years, will focus on tidying-up activities and preparing the power sector to operate according to free-market rules: a stocktaking and audit of the whole power engineering property holdings of the Russian Federation, preparing a legal basis and regulations for the functioning of the competitive wholesale market, the creation of a system of separate financial reports for various types of activity within the sector, a financial clean-up of the power enterprises, and so on. The result of this stage should be the creation of conditions for the functioning of a competitive energy market and financial transparency in the sector. In the first stage, a horizontal division of RAO UES should also start – into the Federal Grid Company (FGC) and the System Operator (SO – the merger of the Central Dispatch Board and local dispatch board into one separate entity). At the end of this stage (by the end of 2004) RAO UES should undergo natural liquidation.

The second stage (2–3 years) would be devoted to creating a wholesale and retail energy market, and phasing out the state from the fixing of prices for electrical energy. The state would fix only FGC and SO tariffs (transmission and services of the dispatch unit). The result of the second stage should be the consolidation of market pricing mechanisms in wholesale and retail, total withdrawal of the state from this process, and the creation of conditions to attract investment.

The third stage (3–4 years) would principally be devoted to ensuring the inflow of investment capital into the competitive power sectors, that is, privatisation.

TSA and UTB – the start-up of power reform in Russia

The Russian government's intentions of supporting reform have been quickly confirmed by two other decisions (after the adoption of the restructuring programme for the power sector), which aimed at an in-depth market reorientation of the sector while at the same time maintaining the state's control over the finances of natural-resource monopolies. At the initiative of the cabinet, a Trade System Administrator for the wholesale market of electrical energy (TSA) has been established – an institution independent of the state, whose task will be to create a power market²⁸ in Russia. The second new body will be a Unified Tariff Body (UTB)²⁹,

established at Vladimir Putin's order and fully subject to the president, controlling and co-ordinating the prices of natural-resource monopolies.

The TSA is intended to be a specific guardian of compliance with market rules, a co-ordinator of energy exchange which ensures direct contact between producers and large recipients. One of the functions of this non-commercial institution would be to offer help in concluding contracts, supervising settlements, preventing price manipulation and disputing settlements. Just as had been the case with the concept of reform in the Russian power sector, the final decision on the TSA's structure is the result of a compromise, forced through by the government, between the producers and the largest recipients of energy. The power within the body, whose advent will mean the beginning of the process of market creation, is to be divided equally between both parties³⁰. This will be an evolutionary process, not a revolutionary one. At the initial stage, about 15% of energy produced in Russia will reach the TSA. Until RAO UES is liquidated (in 2004) some part of the market, particularly supplies to municipal economy and budgetary institutions, will still be regulated, although prices for all categories of recipients are to increase gradually, as are the quantities of energy transferred to the exchange. In the longer term, the operation of the TSA should significantly change the shape of the present Russian power market. The advent of the TSA should also automatically eliminate intermediaries, something to which certain interest groups are by no means indifferent.

The Unified Tariff Body (UTB) is intended to eliminate the chaos which has dominated the current national tariff policy, and to take over the control over prices which so far have been regulated by various institutions and adopted by the Ministry of Anti-Monopoly Policy (MAP)³¹. The unofficial definition of the UTB as a 'super-ministry for natural-resource monopolies' reflects the significance of this institution. Tariffs of natural-resource monopolies affect the prices of all other domestic producers, and they are of fundamental significance for the functioning of the non-raw materials sector. From the beginning of the reform, the state has been trying to regain control over them, but the lack of transparency of the monopolies, coupled with their huge lobbying capabilities, are the reasons why these attempts have so far been to no avail. The UTB's predecessor, the Federal Energy Commission (FSK), is controlled to a considerable extent by the aluminium and oil lobbies. In principle, the state has had little

influence on energy price rises in recent years. Yet an increase of tariffs of any of the monopolies automatically entails an increase of other monopolies' tariffs, and thus higher inflation³².

It is symptomatic that the presidential decree establishing the Unified Tariff Body provides neither for the creation of any commissions or working groups (as has been the case with the RAO UES reform programme and the TSA), nor for putting any finishing touches to the concept of the UTB. The guidelines included in the decree which relate to the structure of this institution and to the scope of its powers are indisputable. That would confirm the opinions expressed by many commentators that the tariff body should not only improve the state's economic policy, but it should also serve to consolidate presidential power and weaken the influence of the various lobbies on those economic decisions which the state intends to have the sole right to take (including decisions related to the fixing of tariffs).

The huge resistance encountered whenever an attempt is made to restructure the most troubled sectors delays the implementation of reforms and gives them an increasingly compromised appearance. Proof of the effectiveness of the lobby which resists power reform lies in the seemingly minor changes introduced to the already adopted programme, including those changes undermining the concept of the state monopoly of the Federal Grid Company. For example, the FSK will not include a regional distribution grid (the government programme provided for the inclusion in the FSK of the whole grid on the territory of the Russian Federation, both high-voltage mains and local grids). Another amendment allows for the construction and operation of private electrical grids. Instead of exclusive rights to trade in energy given to the independent socialised enterprises which was provided for in the government version of the reform, the new wording of this point states that the status of supplier can also be granted to regional AO-Energos. In practice, this means the maintenance of the local monopoly of regional power companies, and potentially the maintenance of the existing non-market mechanism.

Nevertheless, owing first of all to the determination of Chubais and his team, the power reform has already taken its first steps. Within the framework of the first stage, the stocktaking of property of RAO UES and of the regional companies has already been carried out, the analysis of their financial condition has been conducted, the statutes of the TSA and the Federal Grid Company have been worked out, and the process of their establishment has begun. The opening of the wholesale exchange of energy has been

scheduled for the second half of 2000³³. The Management Board has devised and adopted the new organisation of the power system³⁴, and has formulated the rules for the functioning of the System Operator. In November 2001, the Belgorod Oblast initiated a pilot project of reforming the regional power companies. In March 2002 the government adopted a package of bills necessary to begin the reform³⁵, as devised in RAO UES. RAO UES experts have worked out a bill on state guarantees for future investors³⁶ and have submitted it to the government.

The reform chances

The adoption of the programme for Russian power reform is not equivalent to a guarantee of its implementation. The course and the temperature of the debate about the reform of the power monopoly have demonstrated that this issue concerns not only the fate of one enterprise but a whole complex of problems, consisting of a combination of the interests of the state, the regions, hundreds of thousands of economic entities and millions of citizens. Nor are these always common interests. It is a paradox, but despite an almost universal conviction about the necessity to restructure the Russian power sector, and despite the adoption of a specified programme of reform, there is still no social consent in Russia for the de-monopolisation of RAO UES. The leftist parliamentary opposition has been skilfully exploiting that fact. The natural-resource monopolies – meaning cheap or free electricity, heat, gas and transport – are the remains of those social elements which still gives the citizens a poor substitute for the feeling of safety; they make the existence of many families possible, and keep whole regions and economic sectors alive. For this reason, a common social acceptance of the reform is doubtful. Nor has the sine qua non condition of every concept of the RAO UES reform – the realignment of energy prices – been accepted by the regional elites or Russian industry, its most influential opponents. For the governors, their ability to control the ‘switch’ is an important instrument of their power. If the plan of reform of the Russian power sector was implemented successfully, and the de-monopolisation and partial privatisation of the sector were carried out, the network of local arrangements, dependencies and links between authorities and business circles would suffer considerable damage. An important element of these arrangements – a specific element that binds them all – is the profit (financial and political) which is obtained thanks to the availability of cheap

or free forms of energy. For the energy-consuming Russian industry (particularly the steel industry) energy is a prerequisite of their existence, and cheap energy guarantees profits and competitiveness on the world markets. The realignment of energy prices would mean the inevitable bankruptcy of many industries. The influence of both parties (the regional elites and the industrial lobbies) in the Russian parliament extends too far to allow the smooth adoption of the legislative acts necessary to begin reforms.

The possibility of reforming the power system in the Russian Federation, the reform consistent with the government programme, also seems doubtful because of other, no less important reasons. Firstly, it is quite probable that the central government and regional authorities will have problems with meeting their debts (which should increase together with the reduction of hidden subsidies). In such a situation, the power sector will have to continue to bear the costs of part of the state budget liabilities. Secondly, a considerable impediment to implementing the reform programme is the high energy-consuming rate of the Russian industry, which consumes over 50% of the energy produced in the country. The cost of common introduction of energy-saving technologies is too high for the state, or the owners of large, already privatised enterprises, to manage on their own. Furthermore, the availability of cheap energy does not stimulate anyone to such investments. Thirdly, the investment climate in Russia is not, at least for the time being, conducive to the inflow of foreign investment. In the near future the power sector will be obliged (for social reasons, if for no other) to subsidise unprofitable enterprises with cheap energy. Finally the political factor, and more specifically the parliamentary elections in 2003 and presidential elections in 2004, will influence the pace of any changes introduced in the sector. The perspective of the elections may considerably weaken (at least until 2004) the determination of the authorities to implement unpopular and socially burdensome reforms; and realignment of energy or gas prices would certainly count as one of them.

Ewa Paszyc

¹ There are 440 thermal power stations and water power plants, and 9 nuclear power plants in the Russian Federation. RAO UES water power plants generate 63% of energy produced in this type of electrical energy plants on the territory of the Russian Federation, thermal power stations – 93%. Data from State Committee of the Russian Federation on Statistics.

² RAO UES has a block of shares, smaller than controlling blocks, in AO Bashkirenergo (22%); Novosibirskenergo (14%) and Yakutskenergo (34%). Situation as of 1 January 2000; Interfax-M&CN, Brochure “Russian Power Engineering Sector 2000”.

³ There are presently nine nuclear power stations operating in the Russian Federation. Eight of them are managed by the state-owned concern Rosenergoatom, which is part of the Ministry of Nuclear Energy (MinAtom). The ninth, the Leningrad Nuclear Power Plant, is subject directly to the Ministry. Their output varies depending on demand.

⁴ The remaining 20% belong to Rosenergoatom.

⁵ The nuclear power plants were not privatised, and they are state-owned enterprises.

⁶ Recipients are principally large industrial enterprises that have direct access to the Federal Wholesale Market in Energy and Power (FOREM). The participation of RAO UES revenues from energy transport in profits before taxation amounts to over 80%. Interfax-M&CN; Brochure ‘Russian Power Engineering Sector 2000’.

⁷ Data as of 31 December 2000; www.rao-ees.ru

⁸ RAO UES is the organiser and the operator of FOREM.

⁹ Thanks to the controlling stake that RAO UES has in CAS, the independent energy producers (Irkutskenergo, Bashenergo, Tatenergo, Rosenergoatom) are in a worse position because they are ‘tied’ to chronically insolvent recipients by the CAS. The CAS principally sells expensive energy generated in thermal power stations of RAO UES, and often forces the competitors to limit their production.

¹⁰ Data from the State Committee of the Russian Federation on Statistics, quoted in the RAO UES report for 1999; www.rao-ees.ru

¹¹ Gas prices in the Russian Federation are three times lower than the prices of mazout, and 1.6 times lower than the prices of coal. The price of 1000 m³ of gas for domestic recipients in the second half of 2000 was 440 roubles (US\$11.3) for industry, 289 roubles (about US\$9) for the public. At the end of 2001 the prices increased to US\$15 and US\$11/1000 m³. The average prime costs of gas extraction (without transport costs) amount in Russia to around 90 roubles/1000 m³. RAO UES uses about 140 bn m³ of gas (data from www.gazprom.ru and from the statistics of Mezhtregiongaz).

¹² From the speech made by Anatoly Chubais during hearings in the Duma on the state of the Russian power engineering industry, January 2001 (www.rao-ees.ru)

¹³ The power engineering disaster in the Primorskii region in 2001 (no electricity or heat for many weeks of -40°C in winter 2001) led to social turmoil in the region and to the resignation of governor Yevgeni Nazdratenko.

¹⁴ Russky Alumini concentrates 75% of aluminium industry in the Russian Federation. It is the second largest producer of aluminium in the world (after American Alcoa). Energy-consuming aluminium plants are usually built in the vicinity of water power plants, which generate cheap energy.

¹⁵ Military interventions – the forced take-over of the headquarters of regional power engineering companies – mostly happen when there is an attempt to change their management, or in cases of power cuts, particularly to military premises.

¹⁶ *Kommersant Vlast* (19 December 2000) cites the amount as being between 10 and 15 bn dollars. Other analysts (among them the weekly *Ekspert*, #17, 8 May 2000) estimate the value of the so-called ‘financial streams’ flowing through RAO UES at not less than 20 bn dollars annually. The data concerns the 1999–2000 period.

¹⁷ Annual report of RAO UES for 2000 (www.rao-ees.ru).

¹⁸ Ibid.

¹⁹ Interfax, *Kommersant* (15 March 2002), *Vedomosti* (13 March 2002) and other titles of the central press.

²⁰ www.rao-ees.ru – comparative summary of the period 1998–2000.

²¹ Anatoly Chubais has been the chairman of the Management Board in RAO UES since 30 April 1998.

²² The increase in the consumption of electrical energy in 1999 (in comparison to 1998) was 3%, the increase in production in 2000 was 3.8%. Annual reports from RAO UES and materials from press agencies.

²³ *Kommersant*, 7 February 2002.

²⁴ The amount allocated for this purpose in the federal budget in 1999 was lower by 80% in comparison to 1990 (*Novoye Vremya*, #13/1998).

²⁵ Including Vladimir Kartenko, the president of the Committee for Power Engineering of the State Duma. From the text of the speech made during parliamentary hearings on the condition of the Russian power industry, January 2001.

²⁶ The estimates of a team of analysts in the Troika-Dialog investment company, presented at the conference ‘Electrical power engineering as a basis for a stable economic development’ Moscow, 7 December 2000; (*Vedomosti*, 8 December 2000).

²⁷ The governors insisted on dividing the whole power engineering system for autonomous territorial units, which would concentrate production, transport, energy distribution and trade in the regions they govern.

²⁸ Administrator Torgovoi Sistemy. This body, according to the programme of the reform, should start to operate in the first quarter of 2002.

²⁹ Yediny Tarifny Organ, established by a presidential decree of 4 September 2001, is to start operation after the amendment and passing of the appropriate laws.

³⁰In the initial period, the power engineering monopoly will dominate in the TSA Management Board. 50% of the votes will be held by RAO UES and the regional companies constituting the holding, 50% by other market operators, including Rosenergoatom and the Russky Alumiini concern. The balance is to be ensured by the mode of decision-taking in the TSA (a two-thirds majority). Together with the gradual liquidation of the monopoly, the participation of RAO UES in the TSA Management Board will decline. In the initial period the state, which will have no shares in TSA, is to supervise the process.

³¹Tariffs are presently controlled by: the Ministry of Transport (railway tariffs, sea transport, river transport, air transport, transport terminal rates etc.); the Federal Energy Commission – RAO UES tariffs and gas prices; and the Government Commission for Export Coordination – charges for oil and gas transport; regional power engineering commissions and executive bodies of local authorities – municipal tariffs (heating, water, sewage system, etc.). The role of all these institutions boils down mostly to the initialling of individual contracts between monopolies (for example agreements between RAO UES and Gazprom on how much the gas and electrical energy prices will increase, or between RAO UES and MPS on tariffs for coal transport). The UTB is also to take over the control over prices of regional natural monopolies, principally of local power engineering companies.

³²For example, the increase of electrical energy prices by 30% leads to a one-off increase of inflation by around 3 percentage points. This is additionally related to the necessity to compensate the general public for the price increase (calculations of the State Committee of the Russian Federation on Statistics, *Vedomosti*, 30 August 2001).

³³In the transition period, the regulated market and competitive market will operate simultaneously; different systems of price fixing and settlements will be applied to each of them. In both cases the TSA will eliminate the practice of 'cross-subsidies'.

³⁴A standard project of reforming the regional power engineering companies provides for the division of regional companies into the production part and the grid part, and also provides for the establishment of territorial generating companies through a merger (under a common management) of energy producers in three to five neighbouring regions (provided that it is in compliance with admissible indices of market concentration) and grid companies within the present 7 joint power engineering systems: Centre, Northern Caucasus, Middle-Volga, North West, Ural, Siberia, East.

³⁵These include the following bills: 'On Electrical Power Engineering'; 'On the Regulation of Prices for Heat Energy and Electrical Energy'; 'On Nationwide Electrical Grid'; 'On Competition and Limits to Monopolistic Activity in Commodity Markets'; 'On Energy Economy'; the changes and supplement to the law 'On Natural Monopolies' and to the second part of the Civil Code. In April 2002 the package is to be submitted to the Duma, where, in the opinion of minister German Gref, their authors will face a fierce struggle.

³⁶In February 2002 the bill was submitted to the government. The UES proposes to create a non-commercial structure, the Investment Guarantees Fund, which would be managed by the state. RAO UES is currently negotiating with potential investors.